

Headquarters Air Combat Command

Air/Ground Fires KI/CAS and Take Names



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This Briefing is:
UNCLASSIFIED



Overview

- **AF Focus on Joint**
- **Budget Realities**
- **OIF Highlights**
- **Joint Fires Issues and Discussion**







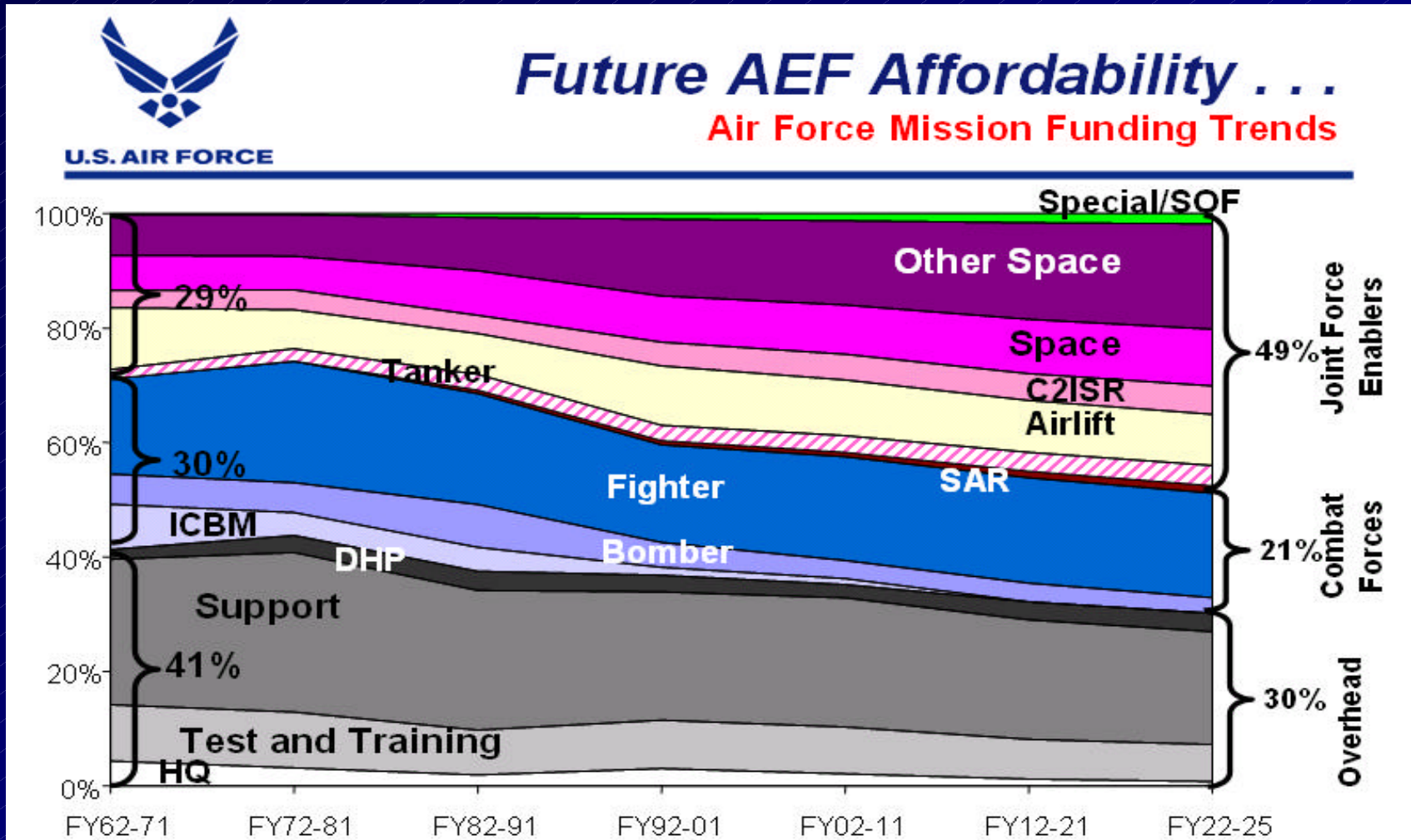
Major Lesson: Joint Warfighting Improves the More You Do It

	Afghanistan	Iraq
Command/Control	-	+
Component/Coordination leading to Collaboration	-	+
Joint Fires Integration-- General	-	+
Doctrine/concepts	+/-	+/-
Fratricide	-	-

**Bottom Line: Make as Principal in
Investment Strategy**



The Air Force Focus: Joint Warfighting



Over 70% of the USAF will joint enable



The Harsh Budget Reality

It's Coming to All Services Soon



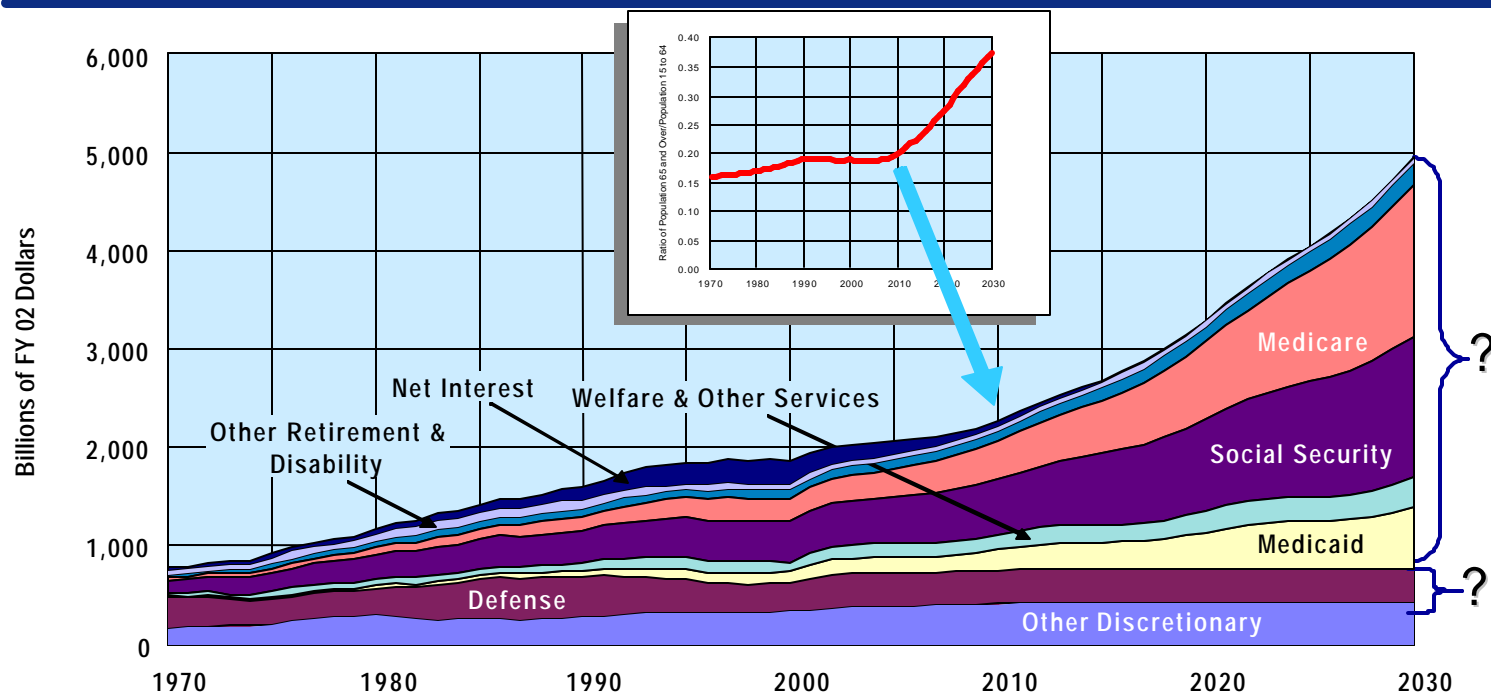
The Budget Squeeze

2010 -- Real Fiscal Constraint



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Federal Outlays Projection



Outlays are projected to increase dramatically after 2010 due to growth in demand for Social Security, Medicare, and Medicaid

Future federal budget trends will add pressure



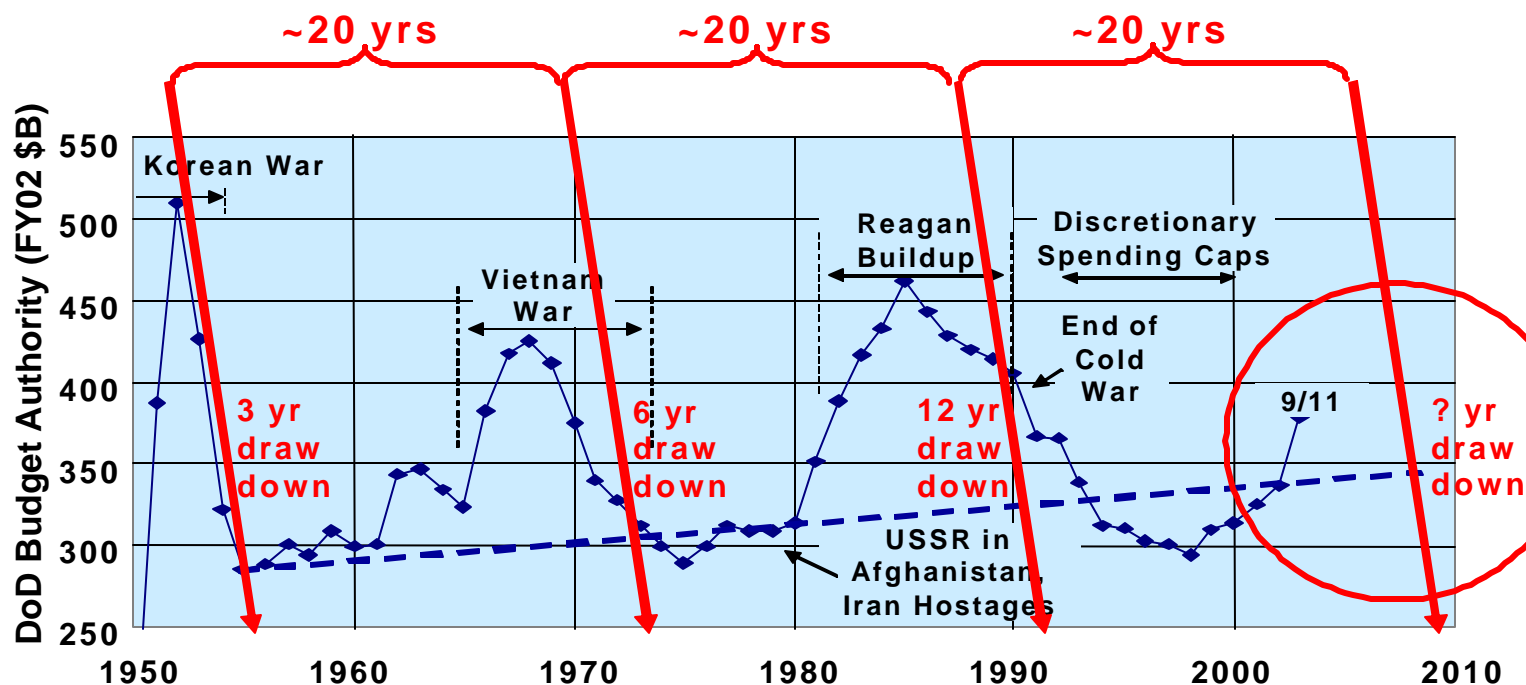
Military drawdown trends



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Defense Budget "Cycle"

Real DoD Growth Rate, 1955 – 2002 = **0.4%**



*Draw-downs occur approximately every 20 years,
with each lasting longer than its predecessor*

Significant drawdown every ~ 20 years...a fact of life



So What ?

No Bucks \$\$\$ = No Buck Rogers

**The Services must now collaborate in peacetime
and wartime**



OPERATION IRAQI FREEDOM: Highlights & Challenges





OEF/OIF Comparison With Desert Storm

- Seamless integration of service component efforts in the CAOC—unprecedented cooperation among components
- Sensor to shooter capability in minutes
- Routine all weather day/night precision (JDAM) matched with long loiter capability yielding on-call lethality over the entire theater
- Persistent multi-sensor ISR (EO, IR, RDR) over the AOR *directly available to the warfighting component*
- Near real-time fused precision targeting capability in CAOC (Predator/power scene lash up able to deliver mensurated coordinates in minutes)
- CAOC equipped to provide rapid situation awareness, and instantaneous connectivity theater-wide, with high-bandwidth
- Unprecedented volumes of HUMINT
- Seamless integration of space control, mobility, and information into CFACC campaign planning and execution
- Synergy between ground-based SOF and airpower



OIF: The Highlights

- **OIF demonstrated the efficacy of modern joint warfare—that is, using the right force at the right place at the right time.**
 - Air, ground, & maritime forces worked together to present a dilemma to the enemy.
 - Ground forces caused the Iraqi army to mass—air sensors and shooters then shattered the Iraqi ground forces.
 - The Republican Guard was separated from their armor and forced to dismount as infantry by air attacks—soldiers and Marines then sweep them from the field.
- **Control of the air is absolutely crucial—you can do everything with it, but nothing without it.**
 - Air operations for OIF began on 16 Jan 1991—we conducted air operations over Iraq for over 12 years...
 - OIF was not an example of simultaneous use of forces—in the months immediately preceding OIF Iraq was attacked with large numbers of sorties.
 - Against future adversaries we may not have a 12 year advantage of operating in their airspace, and most likely they will have much more robust anti-access capability.
- **Flexibility of each of the service components allowed for rapid adaptation to new information and changing situations**



OIF: The Highlights

- **Today we are in an Era of Mass Precision—however, we can perform force application better than we can assess its effects**
 - At no time in history has so much accurate firepower been employed in such a compressed period of time—e.g. over 600 coordinates for mobile targets/day
 - Our challenge is being able to effectively command and control the rapid employment of mass precision, assess effects, and react in the most effective way.
 - Effects-based, vice destruction-based feedback a key solution—intel architectures and organizations require appropriate adjustments
- **Command, control, and information integration was best seen to date**
 - Centralized control/decentralized execution is key to C2 success
 - Fully equipped, trained, and operating combined air operations centers allowed seamless integration of space, mobility, information, and force application
- **Persistent ISR and persistent precision strike capabilities proved key to creating discriminate effects anywhere in the battlespace**
 - Air dominance ensured a move from “stand off” to “stand in” enhancing performance of all Service operations.
 - Persistent precision in anti-access environment equates to long-range/high payload/stealth coupled with robust air and space ISR capacities.



OIF: The Challenges

- **Integration and planning of all elements of the national security apparatus is less than optimal**
 - We need to do a much better job integrating all the elements of National power—diplomatic, economic, and military
 - Interagency process ok for crisis but needs work in planning
- **Perception management is as important as force application—if not more so**
 - Need better integration of perception management, information operations (IO) coupled with lethal and non-lethal force application
 - Allowing an adversary to broadcast their perspectives to the world during conflict may negatively impact accomplishment of mission objectives
 - Proactively orchestrate perceptions—use the truth to our advantage
- **Current Fire Support Coordination Measures often *inhibit* rather than *create* flexibility**
 - Excessively deep placement of the fire support coordination line (FSCL) can sub-optimize attainment of joint force objectives
 - Need to consider elimination of linear FSCLs as a fire support mechanism in joint doctrine—replace with Kill Box / Key Pad construct as already being used in other theaters



OIF: The Challenges

- **The appropriate balance between the risk of collateral damage and mission accomplishment may vary between, and throughout a joint campaign**
 - A significant effort was made to limit collateral damage beyond what the law of armed conflict (LOAC) required.
 - Was that approach counterproductive to the extent it may have extended the campaign, enhanced enemy morale, or increased risk to coalition forces?
- **Need unvarnished “truths” of OIF to achieve most valuable “actionable” DoD “lessons.”**
 - Get as much feedback as possible from Iraqi forces that were the object of OIF action.
 - Assess, describe, and codify the physiological impacts of undefendable air attacks against Iraqi forces—enormously significant in affecting will of an adversary, but little recognized.



OIF Take Aways

- **Control of the air is absolutely crucial**
 - We must be able to achieve air dominance in the most challenging of circumstances—F/A-22 is key to that capability
- **Entering an Era of Mass Precision**
 - Need to improve our assessment processes and move to “effects-based” vice destruction based methodology
- **Perception management is as important as force application**
 - Need better integration of perception management, information operations (IO) coupled with lethal & non-lethal force application
- **24/7 precision air attack and ever increasing use of cyber warfare is changing the conduct and nature of warfare**
- **Joint warfare: Using the right force at the right place at the right time**



Issues/Discussion

- TSTs
- JSTARS
- KILLBOX
- ISR



Time Sensitive Targeting

- **Made improvements to improve quality, compress timelines in the “kill chain”**
 - **Accelerated testing of Litening Pods for F-15Es / F-16 Block 50s / A-10s / B-52s**
 - **Integrated internal carriage of Laser Guided Bombs on B-52**
- **Provided data link (Combat Track II) capability to all bombers**
 - **CAOC and TACPs able to update routes / targets direct to aircraft**
 - **Result: increased flexibility, responsiveness; reduced errors**





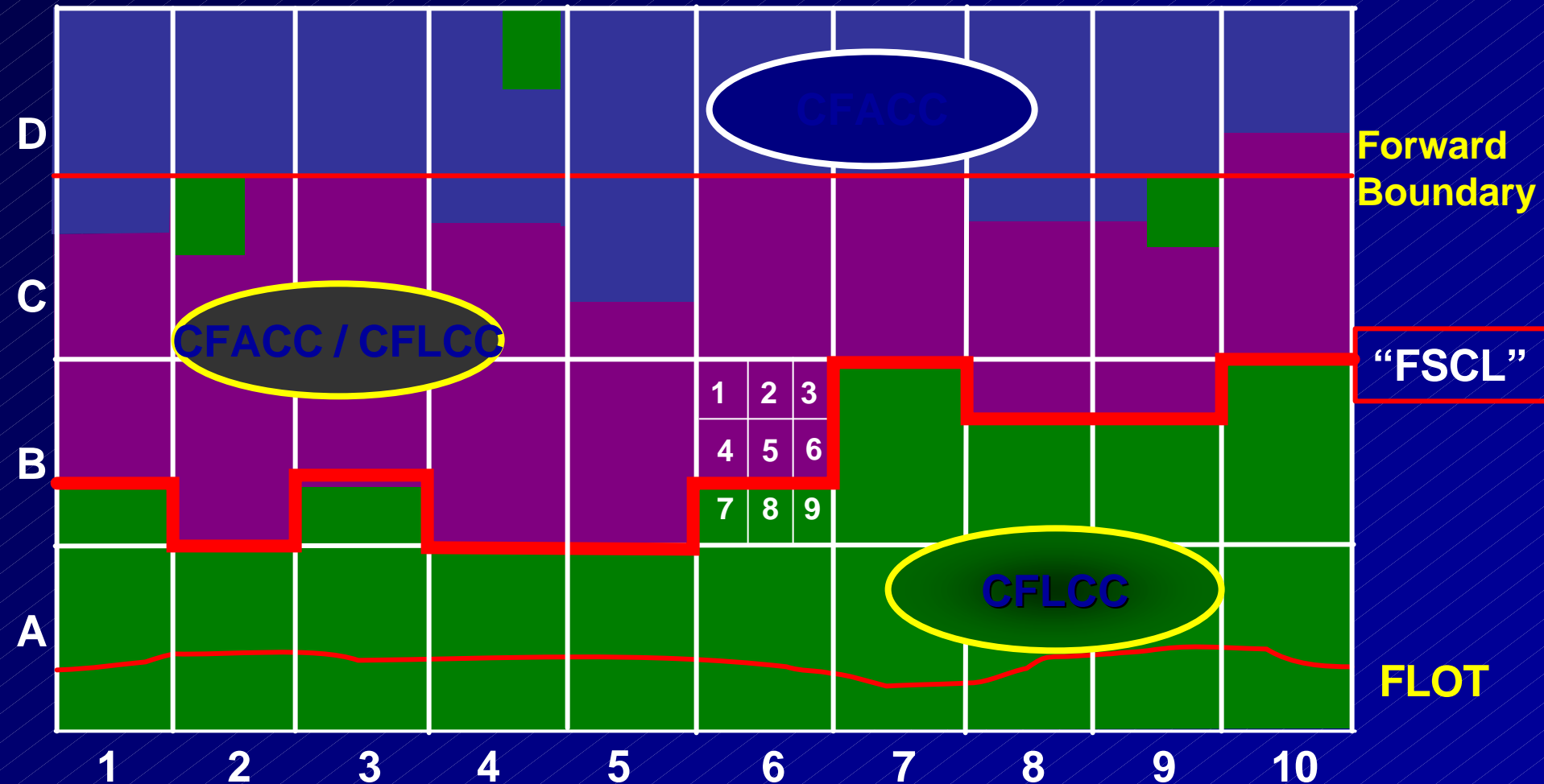
Changing Warfare Concepts

- Here's the basics of how KILL BOX OPERATIONS transitions from Linear to Nonlinear/Noncontiguous Operations
 - “**GREEN**” – Ground Component Controls all fires
 - “**PURPLE**” – Altitude deconfliction using Air Assets above and Surface Fires below coordination altitude
 - “**BLUE**” - Air Component Controls all fires

All fires are *integrated* with Joint Force Commander's scheme of maneuver



Changing Warfare Concepts





Intelligence, Surveillance and Reconnaissance

- **Predator and Global Hawk went to war (OEF / OIF) as ACTDs – value as key weapon systems demonstrated**
 - Confirmed value of persistent ISR / BDA capability
- **Predator**
 - Production of MQ-9s
 - Fix Development/ O&M shortfalls
- **Global Hawk**
 - Fix Development & Sustainment
 - Defer Manpower, FOL MILCON, O&M





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BackUps



The Easy Story: Obvious Winners

- **Many technologies / systems “firsts” and “winners”**
 - **Combined Air Operations Center (CAOC) Weapons System**
 - **24/7 C2 and information integration ... the “model”**
 - **Routine all weather day / night precision yielding on-call lethality over the entire theater**
 - **JDAM and JSOW plus long loiter (B-1, B-52, B-2)**
 - **RPVs (Predator) and UAVs (Global Hawk)**
 - **Armed (Predator) RPV...**
 - **Future munitions / designator on GH**
 - **Advanced targeting pods (Litening II)**
 - **F-15E systems employed in SCAR/ISR roles**
 - **B-1 sensors used for ISR (radar MTI capacity)**
 - **And many others ... “OIF: By The Numbers”**

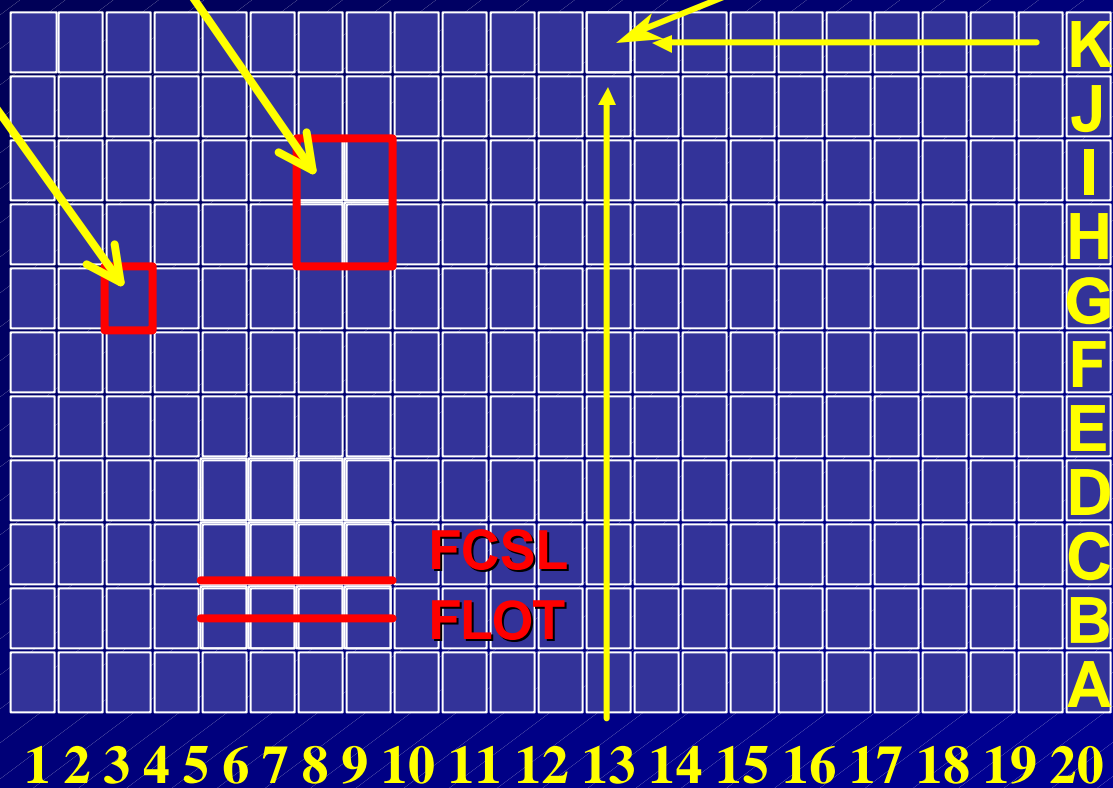


Killboxes--Graphic

Army Unit of Action

SOF

1-250,000
Scale Maps
(JOGS)
Can Be
Overprinted
With The
GRS



A Killbox is a
grid square
from surface
to unlimited

Subdivided into
smaller units

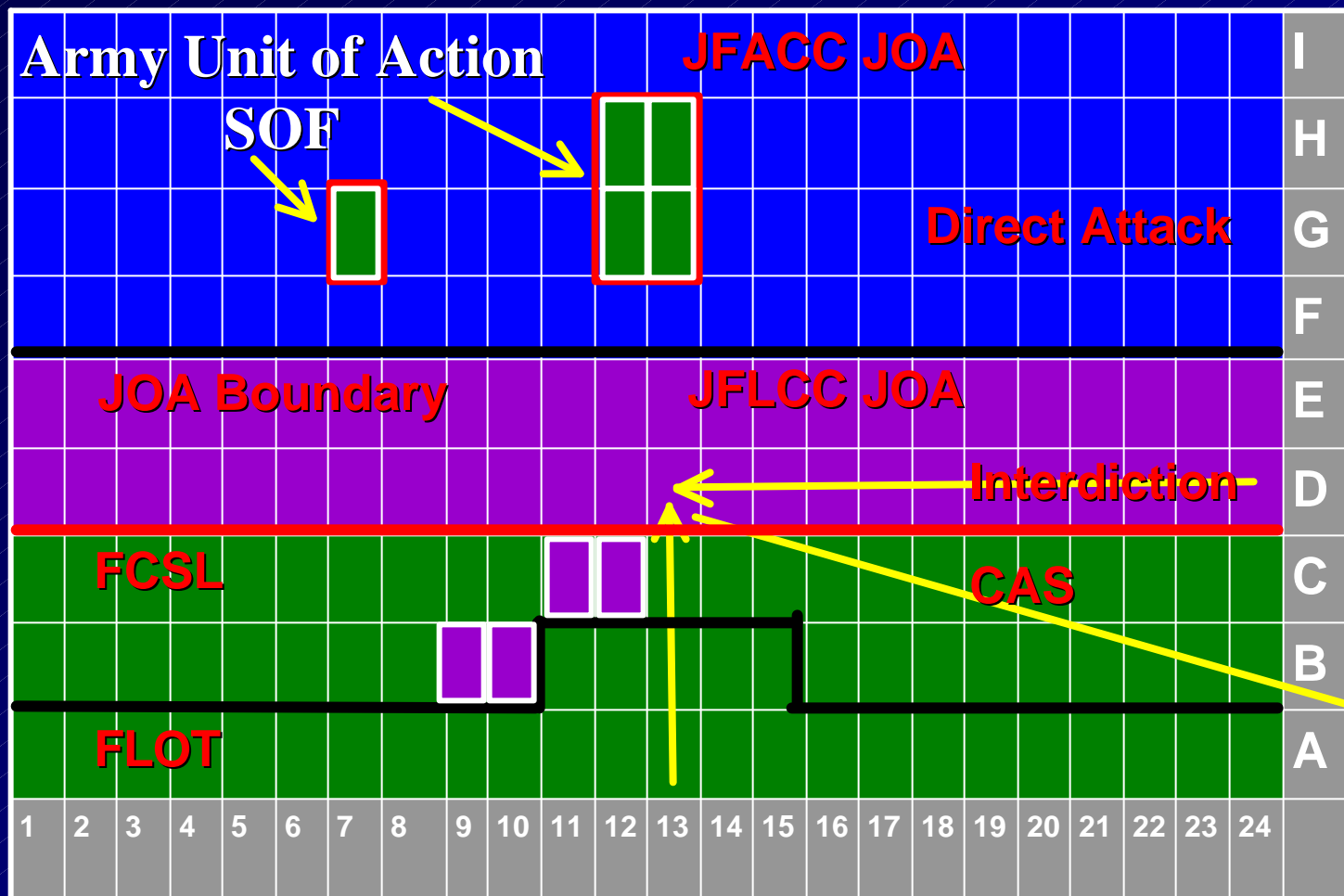
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1	2	3
4	5	6
7	8	9



Proposals

2: Implement Killboxes



Killboxes are common grid squares that are opened, closed, divided vertically for airspace and fire support coordination.

Subdivided into smaller units:

13 D 2

1	2	3
4	5	6
7	8	9



Conclusions

